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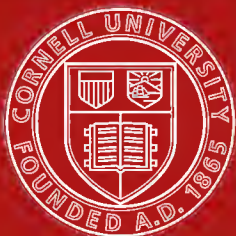
By
LAURA B. GARRETT

BUREAU of EDUCATIONAL EXPERIMENTS

70 FIFTH AVENUE, NEW YORK

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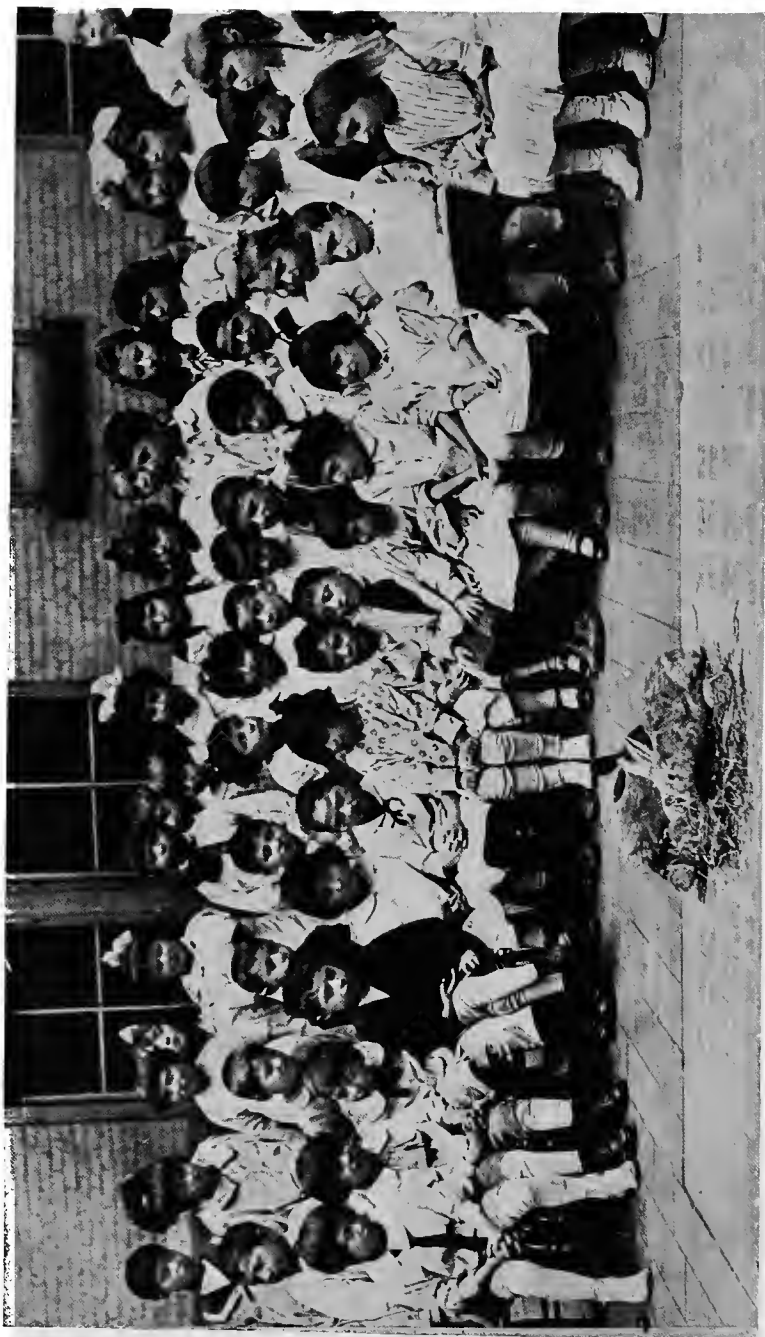
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STUDY OF
ANIMAL FAMILIES
IN SCHOOLS



THE BUNNY FAMILY

"The babies huddle under the father. He's a good one."

STUDY OF
ANIMAL FAMILIES
IN SCHOOLS

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Introduction

CHILDREN and animals have always seemed a natural and wholesome combination. One hates to think of a childhood without pets. Yet that is the sort of barren childhood which the vast majority of our city children nowadays are spending. There is no place for these little dumb friends in the crowded homes, the crowded streets and the crowded days of our modern city life.

As in so many other ways, if old privileges are to be kept for children under new conditions, the school must be the means of bringing this about. If modern city children are to know the joy, the beauty, the significance of animals, it is necessary that they be included in the children's school home. The description in a book is but a tame, a pathetic substitute for the live creature. A chipmunk was taken as a visitor to a New York East Side class. Those twelve-year-old children thought the little striped creature was a tiger! They had studied a tiger in a book.

To use animals in a school room along with other lessons is quite in keeping with the general loosening up of school practices. It is one more way of letting a child learn through his natural curiosity and pleasure. But, like other expansions within a class room, it involves adaptations. It raises practical problems which need practical answers. Perhaps the answers contained in the following paper may show teachers how to open the doors of their class rooms to admit the historic friends of children—the animals.

Committee on Toys and School Equipment



"THE HOME WE BUILT AND THE FAMILY WE RAISED"

STUDY OF ANIMAL FAMILIES IN SCHOOLS

NO CHILD should be allowed to grow up without having the training which the care of pets gives him. The values of animal friends to children are so many that it is difficult to think of them all. The most important is the joy of the child as he plays with his friends. He learns at the same time respect for life, and incidentally gains an understanding of reproduction, as he sees his pets bearing young, and is automatically instilled with the appreciation of parenthood and the cleanness of the sex instinct. Kindliness develops with even the roughest little "tacker" as he is trained to handle and to be responsible for the care of these friends. The children also learn self-control and become more quiet, not from discipline superimposed by teacher or parent, but because they want to get closer to the pets, and because they must be quiet to see what the animals do. The whole subject of sanitation—which greatly needs to be taught in a vital way to the children in the public schools—can be taught in connection with animal study: proper housing, ventilation, clean food, and the protection of the animals from their own excreta.

Criticisms of Work With Animals

MANY people feel that there are so many objections to work with animals that it is not wise to take it up in the city schools. Thus it seems that the only children who may realize the joy of knowing animals are those who live in the country. As a matter of fact, country children acquire knowledge of animals and their habits, without that correct scientific study and ethical training which should always accompany work with animals, if it is to be of educational value. The chief objections to work with live animals in city schools are these:

1. That the animals lose their freedom and that this reacts upon the children;
2. That it is difficult to keep them clean;
3. That they distract children from their work;
4. That the children are naturally cruel, and constant care is needed to protect the animals from them;

5. That the untrained teacher does not know how to handle animals, nor how to give the children the freedom which is essential for the development of this work;
6. That there is no one to care for animals over week ends and holidays.

The most difficult one of these criticisms to meet is, that we have to confine animals and keep them under unnatural conditions. Any one who loves animals feels this intensely; but the value of this study to the children is so vastly more important than the life and comfort of the animal that, after all, these objections are over-balanced.

The difficulty in keeping the animals clean and sanitary is not in the least an objection to the work, but rather a point greatly in its favor, as many lessons can be given in sanitation and hygiene, to which the children eagerly listen because they want to give their pets the best care.

The fact that the animals distract the children from their other studies may be of real good, for little school-work is equal in value to the training in keen observation, kindness and composure which the children thus learn.

The statement that children are naturally cruel is very true; but the training they get to counteract this and the class ostracism which is developed toward the boy or girl who is cruel is most valuable.

The difficulty of caring for animals over week ends and holidays is easily disposed of. The real difficulty is to choose from the big group of applicants who clamor for "One, just one, to take home! Mother is waiting for one to visit us!" One teacher made trips from Brooklyn to our school in Manhattan to care for a mother rabbit and her young. Janitors, too, help to watch over the families.

During the summer we have found a settlement house glad to welcome our pets—rabbits, pigeons, and guinea pigs. In the future, as more schools undertake the work, these animal families will be found valuable assets to the equipment of summer playgrounds and school gardens, and thus their care in the long vacation will be hardly a problem.

Values of the Work

One of the most important values of the work is the training it gives to the teacher. Many of the teachers know nothing about the animals or how to handle them. They are not accustomed to think-



THE COMMITTEE, "HAVING OUR PETS PHOTOGRAPHED"

ing or talking frankly where sex is involved and therefore are easily embarrassed by the naturalness of animals. Many of them are unable to teach the children with regard to the animals which are mentioned in their history, geography or other lessons. Teachers know little of their children except in the regular work of school routine, and as the children become keen in their interest, unselfish toward other members of the class, forgetful of the ordinary school discipline and quiet in behavior because of their new interests, the teacher sees a different group develop from her old class.

Another value is that of the mutual interest and friendliness which soon grow up between those classes having families of animals in their charge. They soon learn to lend and borrow pets and exchange information about them.

A surprising number of superstitions have been unearthed during the study of animals. The one we all think of, of course, is that hop toads make warts. This is a common superstition with every nationality. (See Riley's "Mr. Hop-toad"). Interesting, though perhaps more local, are these: "Guinea pigs take away the 'sticks' (rheumatism). My father, he had a guinea pig that took away his sticks. He let it run up his back. Then he got well and could go to work, and he sold the guinea pig to a sick man for five dollars." "If you blind a rat and let it run away, it will carry all the disease out of the house and if you keep the rat's eyes and dry them and

hang them around your neck, you will never get sick any more. My brother, he knows just how to take the eyes out of a rat. He can squeeze the rat, and when the eyes bulge out he takes them out, and then he lets the rat run away and saves the eyes. He knows how to do it."

These are not isolated stories. The same or similar stories have been repeated by class after class in New York schools, where all the children have been ready to contradict the teacher and protest that these were real ways to get well and keep well. These superstitions should be recognized as a groping toward health. They should be met with respect, not scorn, and the discussion which follows—perhaps weeks after—will lead to a better, saner understanding of the laws of health.

The elimination of fear is another great value of animal study. It is very interesting to study in our kindergarten classes the supposedly inherited fear of snakes. A few children are somewhat nervous with anything that moves, but they show no more dread of snakes than they do of any other animal. In fact, they are not so afraid of them as they are of animals that move more quickly. Very soon all of the children learn to admire the beauty of color and scale markings and the graceful form and movements of the snake, and they are full of astonishment to learn that the snake "can walk and it has no legs." At the same time, a careful study is made of the economic value of the snake as the enemy of rodents and insects. In the older classes the same work is done, but there are many more children here who have been taught fear. By suggesting to the ones who show signs of fear that they stay away while the rest of us play with the animals—snakes in particular—the nervous ones quickly learn to touch them and handle them without fear. This elimination of fear is one of the most valuable results of the work with animals.

The only animals the city children know are the alley cat and the stray dog who suffer intensely from cruelty, and the horse who is abused by his driver until every one who loves animals suffers with him. When I say "animals children know," I mean the ones they can fondle and love and care for or get near to. The reaction against cruelty as shown by our children in their attitude toward the above-named animals has been very strong. In connection with this part of the work, classes are taken to the street to study the whole problem of the street cat with regard to its misery, its food—the garbage—and the harm it may do by spreading disease. In the same way dogs are studied, and a more careful study is made of the



OUR FAMILIES—RABBITS AND PIGEONS
 "We helped them raise their little folks."

horses we see in the streets. We study their loads, their harness, and the treatment given them by their drivers. Surely those of us who see horses in the streets of New York must feel that many of their drivers have never had pets of their own when they were children. We have made a careful study of the "Prayer of the Horse," by F. H. Burgher, ex-Deputy of the Police Department. As a part of this study of street animals we visit the blacksmith shop and stables. Many a horse has received better food or his harness has been readjusted at the suggestion of a class of little folks who watch the same animals from day to day. The almost immediate response from the children if the animals suffer, shows one of the valuable lessons in connection with the work.

It is very interesting to notice the different reactions of the animals to the children as they are fondled. With some children the animals snuggle down and go to sleep, or sing, or purr, or talk to their friends. Certain types of children cannot handle animals at all. The animals run away or squeal. The children notice this immediately. A sturdy little fellow in the kindergarten once protested as a guinea pig was to be given to a classmate. He waved his hand vigorously and said, "Oh, don't, don't give it to him! He has a 'fraid!" There sat a weak, nervous, little fellow who had poor co-ordination and who would probably have injured the animal

by nervously throwing it aside. A long and persistent training is given these little folks who are afraid of the animals or who do not know how to handle them. Gradually all the children can be taught, and their pride is developed till they are able to announce that the whole class can be trusted.

Method of Introducing Work Into Schools

This work should be introduced in the school in the following way: First the animals should be taken to the children as visitors. After they have learned to handle the pets and to care for them, the children should be encouraged to build homes and to bring pennies for food and to get ready for families they want to raise. If they have the means, they should buy their own animals. This develops in the children a sense of ownership which brings with it a feeling of responsibility for the proper care and protection of their animal friends.

The work should be varied according to the needs of each school group, for the interests, superstitions and fears differ greatly with the different nationalities and with the varying opportunities of different children for knowing animal life.

The same animal can be used throughout all the grades. The little folks show joy and interest in observing and hugging the pets. As children grow older they ask questions about the habits, habitat, enemies and economic uses of the animals. Gradually, beside all these other interests in the animals, their place in the animal world and their values to man become of absorbing interest. Throughout the entire work sketches are made, stories told, poems learned and games, which have been developed by the children to represent scenes in the lives of the animals, are played.

The children should have a chance to select the pets whenever possible, or should appoint a committee to buy them. It seems almost an inborn trait in the children that they select the parents which are mature and in a healthy condition. They reject with scorn any animal which does not look well. Parents which have different genetic traits should always be selected. For instance, a white (albino) doe mouse and black or lilac buck; in guinea pigs, a short-haired English male with an Abyssinian female. Where there is an opportunity for raising chickens, an interesting cross is that between a bantam rooster and a Plymouth Rock hen. The children notice the traits of the parents cropping out in the second and third generation and soon announce with intense interest that it makes a difference what kind of parents the babies have.

Inasmuch as the time to begin to teach children is while they are very young, this careful selection of the parents of their pets is of vital importance and leads to many interesting discussions with regard to eugenics, reproduction and sex hygiene.

The knowledge that the child gets about animal life should be accurate and scientific. If the "life history" of an animal is presented to a child—as it ordinarily is—with reproduction entirely omitted, it is not only a lost opportunity to give the child in a natural way the information which he may otherwise acquire in a twisted way, but it is an actual distortion of fact. It is essentially an unscientific point of view to expurgate your material for ulterior purposes. This does not mean that reproduction should be stressed. It should not. It should merely be treated honestly as a part of the situation when it really is a part. It thereby becomes related to something understandable and ceases to have the glamor of mystery. The children's own questions and attitudes are the best guide in this matter. This teaching when young, prepares the children for a better understanding and respect for the great surge of the creative instinct which comes to them later.

These discussions arise as an inherent part of the study of animals. They create no undue interest and are very normal; they simply fall into their rightful place.

In connection with this animal work, Dr. Hornaday, the director of the Bronx Zoological Garden, loans animals to supplement our school study, and animals are chosen which are either related to our residents or which are a strong contrast. The immediate result is that the children want to go out of the school and to other parts of the city to study the animal life they find.

The Museum of Natural History loans mounted animals (cousins of pets) which are studied with great care and with much interest after the children have become familiar with the live animals. Whenever young children are given their freedom, though wonderfully mounted animals are at their disposal, they crowd around one little moving animal and desert the mounted specimen altogether.

LAURA B. GARRETT

New York, March 1917



WE STUDY THE ANIMALS OF THE STREET



A BETTER WAY OF CARING FOR THEM

ANIMALS USEFUL IN THE SCHOOL

FISH must be kept in a rectangular aquarium. They are generally over-fed, and if kept in globes they smother for want of air. There is probably no pet in the city homes which is more generally kept and more abused than gold fish (dealers are interested only in selling globes and fishes). A book on the care of aquaria can be obtained from the Aquarium Society at Battery Park.

Two aquariums, one for fish, tadpoles and snails, and another for snails only—where both life breeding and egg laying varieties may be kept—are valuable in the school-room. If a well-balanced aquarium is kept in the school and the children are taught about the relation of plants and animals to each other, the lesson of mutual helpfulness is thus taught without any moralizing on the subject.

Various sized aquariums can be used in the school room, costing from \$2.50 up. The bottom should be covered three inches deep with sand and pebbles which have been boiled to kill all germs before being placed in the aquarium. Then various water plants should be placed in the aquarium and allowed to root there about a week before any fish are put into the tank. The fish should be fed regularly every other day and given only the amount of food which they eat. All extra food should be taken out of the aquarium and not allowed to sour in the water. There are many beautiful details about the aquarium life which can be got from books on the care of aquaria. Fish respond to friendliness and learn to eat from the hand.

PIGEONS can be raised in the school room and have, in one class, had the freedom of the whole class room. They learned to drink from the cups on the window sills and the children scattered peas and grain in certain places on the floor for them. These pets built their nests and raised their squabs to maturity in the class room. Pigeons are valuable because of their variety of color, their gentleness, their incessant cooing and their home traits—both parents feed, protect and train the young. The parents partially digest the food and regurgitate it into the mouths of the young, a step toward the milk giving mammals.

Pigeons that are confined should have a cage which is a yard cube and the top of the "house" should be protected from the rain and sun. The nesting box should be at least 6"x6"x10"; a cigar box is very good as it is sufficiently large and it keeps away lice. They should be fed green food, peas, corn, buckwheat, barley, and some salt fish should be hung in the cage where the pigeons can get to it. Some kind of grit (oyster shell, for instance) should be kept in the cage.

CANARIES can be bred in the school room, but they are expensive, especially since the war, and they cannot stand the changes of temperature which occur over week ends. They are not very practicable except in places where much more care can be given them than in the public school. Therefore it is not wise to try to breed canaries, though they are very good parents and both male and female feed and care for the young. Get books on breeding canaries, or better, go to any German who breeds them. A German neighbor of mine who lives in a tenement can give more helpful hints in ten minutes than one could get from a book in a year.

WHITE MICE (or any variety) are most valuable in city schools, as they need but small boxes and they breed very rapidly, and both parents, if well fed, help to care for their young. They can be kept in very inexpensive boxes, which from time to time should be thrown away as new ones are to be had at any grocery store. For one pair of mice, a box about 12"x8"x6" is desirable, covered on one end with $\frac{1}{4}$ -inch wire and provided with a movable, or removable, side. All the rough edges of the wire must be covered to prevent the mice from injuring themselves. A smaller box 3"x2"x2", without a bottom, should be kept inside for a bed and a small circular opening should lead into it. For bedding, sawdust or pieces of paper, which the mice chew up, can be used. They should be fed hard bread to keep their teeth sharp, and bits of green vegetables, small amounts of oats and wheat; and the nursing mothers should have milk after the little ones are born. In fact, the food should be varied. *Plenty of water should be accessible to all animals all the time.* Mice mature in three months, and may live to be two years of age. The period of gestation is 21 days, and from 4 to 8 young are born at a time. The little ones are born naked and blind, and are intensely interesting to the children; they sometimes think they are worms and then suddenly decide they are baby mice. The mother builds a wonderful nest with a little hole

for entrance, and if the babies are removed, carries them back with great haste, grabbing them by the neck or any part of their bodies. Mice mothers differ in the way they care for the young. At one time an experiment was made with four mothers who had 18 young. We took all the young from their boxes and put them outside. One big, black mother ran around the box and played, paying no attention to the absent little ones; one immediately went to work and fixed up all the nests and the other two dragged the fat, naked babies and put them into the nests without any apparent thought as to where they belonged. Mice cannot be handled in this way until they are about two weeks old. If disturbed before this, the mother may become nervous and in her anxiety she may kill them.

WHITE RATS (or any variety) are very valuable and less objectionable than mice in some ways, as they have practically no odor and will run around the school-room and "make tricks" which the children enjoy. The children immediately learn the difference in intelligence between the rats and the guinea pigs and rabbits. A box 2'x1'x1' is big enough for the rats' home. It should have a $\frac{1}{2}$ -inch wire mesh side and contain a small nesting box 6"x4"x4". This should be an inexpensive little box such as can be obtained at any grocery store. It should be thrown away very frequently. Sawdust, cork, excelsior, or newspaper may be put on the floor as an absorbent. Both boxes for the mice and rats can be hung by the back on the wall and thus become a part of the school equipment in a very normal way. The class can select a color and the box can be painted, *on the outside only*, to make it more attractive. If the mice or rats are to be kept where either domestic or wild mice, or rats can disturb them, the wire on the front should be put on in two layers so that an inch or two of space lies between the two surfaces. This is to keep the wild varieties from disturbing the others, as they sometimes bite their toes and tails. Rats should be fed and watered the same as mice.

GUINEA PIGS—"cavies"—make the most satisfactory pets for the school-room. They are clean, have very little odor, are perfectly harmless (in fact, too much so, as they do not protect themselves from the children) and are very friendly. They reproduce rapidly and make very good parents. The only objection to guinea pigs is that they are so short legged that the slightest fall, even from the lap of a child, may paralyze them. However, though this is hard on the animals, the children soon learn to protect them,

and an occasional tragedy is a valuable lesson. A box 3'x2' x 1½' will house one male and three females. The door should have a half-inch wire. There should be a movable box inside for sleeping quarters. The nesting box must be protected from wet and dampness with hay or sawdust for bedding. They should be given two meals a day (oats, bran, vegetables or greens). Nursing mothers should have bread and milk. Plenty of water should be provided. The period of gestation is about 62 days. There are from 1 to 4 young at a time and they mature in 8 to 10 weeks, but should not be bred until 5 or 6 months old. Hence the sexes must be separated when about 4 weeks old. Food cups should be placed low on the sides of the cage so that the pigs cannot soil the food, and preferably should be made in such a way that only a small amount of food will come down at a time. Water cups should be made of galvanized tin and should be of the kind which cannot be upset. These can be procured at Wanamaker's for 35 cents.

RABBITS have always been loved by children because of their beauty, their friendliness and because they stand mauling. Rabbits are not affected by the cold and can be kept in cages in the school yards. They breed very rapidly—that is, two or three families a year—and the mother shows wonderful care of her young. Just before the young are born, she vigorously arranges the nest, using straws, hay, etc. Then she pulls great mouthfuls of fur from her breast to line the nest, and she often attacks other rabbits and grabs great mouthfuls of fur from them. After the young are born, she cleans them and puts them into the nest. The little blind, naked babies are a wonderful surprise to the children. In a week the young can be handled and examined with care, and from then on they are a source of constant joy and interest. (When handling the little ones, rub the hand over the nest and then over the mother so that she will not be disturbed by a strange odor. She may kill her young if frightened). There are no animals that are more abused than rabbits by pet fanciers. They not only lift rabbits by the ears, but tell children that this is the way to handle them. Of course the ears are surrounded by blood vessels and well developed nerves; no part of the body is more sensitive, and it is very cruel to lift a big, heavy rabbit by the ears. This is, however, a very hard superstition to eliminate as stock dealers insist that it does not hurt the animal. All animals need water and the succulent vegetables do not take the place of water. If five or six babies are born, four are all she can care for, and the weakest should be destroyed or should

be taken away from the mother and raised by hand, or all will suffer. The young are weaned in about four weeks, and in about two months the males and females should be separated to prevent their breeding before they mature. Rabbits should be fed hay (clover hay is best), oats, greens and dried bread. Again, nursing mothers should be given bread and milk. A desirable box is $2\frac{1}{2}' \times 2' \times 2'$ with half-inch wire mesh and removable sides. Clean sawdust or paper should be put on the floor and should be changed at least two or three times each week. A handful of Sanitas is good to keep down the odor in these cages. In cold weather rabbits should have hay or straw for bedding.

The Marchbanks Press New York

Bureau *of* Educational Experiments

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